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	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
1	BRS	L2	26	(texture$1 near3 filter$3) same boundar$3	USPAT	2004/12/15 16:08			
2	BRS	L3	16	2 same imag$3	USPAT	2004/12/15 15:56			
3	BRS	L4	2	1 and 3	USPAT	2004/12/15 15:57			
4	BRS	L5	2	3 same edge$1	USPAT	2004/12/15 15:58			
5	BRS	L6	1	2 same gabor$1	USPAT	2004/12/15 16:03			
6	BRS	L7	295	imag$3 with (boundary adj locat$3 or edge adj locat$3)	USPAT	2004/12/15 16:04			
7	BRS	L8	14	7 same filter$3	USPAT	2004/12/15 16:04			
8	BRS	L10	0	9 and texture$1	USPAT	2004/12/15 16:05			
9	BRS	L9	11	8 same edge$1	USPAT	2004/12/15 16:05			
10	IS&R	L1	785	(382/199).CCLS.	USPAT	2004/12/15 16:06			
11	BRS	L11	654	(texture$1 near3 filter$3)	USPAT	2004/12/15 16:08			
12	BRS	L12	3	1 and 11	USPAT	2004/12/15 16:10			
13	BRS	L13	1	"6111983".pn.	USPAT	2004/12/15 16:10			
14	BRS	L14	1	"6141033".pn.	USPAT	2004/12/15 16:24			
15	BRS	L15	0	13 and filter$3	USPAT	2004/12/15 16:24			

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
16	BRS	L16	1	14 and filter$3	USPAT	2004/12/15 16:26			
17	BRS	L17	0	16 and texture$1	USPAT	2004/12/15 16:25			
18	BRS	L18	1	"6192150".pn.	USPAT	2004/12/15 16:25			
19	BRS	L19	1	18 and filter$3	USPAT	2004/12/15 16:30			
20	BRS	L20	0	19 and (edge$1 or boundar$3)	USPAT	2004/12/15 16:30			
21	BRS	L21	1	"6178260".pn.	USPAT	2004/12/15 16:30			
22	BRS	L22	1	21 and filter$3	USPAT	2004/12/15 16:31			
23	BRS	L23	0	22 and texture$1	USPAT	2004/12/15 16:31			
24	BRS	L24	1	"5881171".pn.	USPAT	2004/12/15 16:31			
25	BRS	L25	1	24 and filter$3	USPAT	2004/12/15 16:32			
26	BRS	L26	0	25 and texture$1	USPAT	2004/12/15 16:32			
27	BRS	L27	1	"5671294".pn.	USPAT	2004/12/15 16:32			
28	BRS	L28	1	27 and texture$1	USPAT	2004/12/15 16:32			
29	BRS	L29	1	28 and filter$3	USPAT	2004/12/15 16:51			
30	BRS	L30	1	"6542180".pn.	USPAT	2004/12/15 16:55			
31	BRS	L31	12500	inspect$4 with object	USPAT	2004/12/15 16:55			

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
32	BRS	L32	7	31 same (imag$3 near7 texture$1)	USPAT	2004/12/15 17:00			
33	BRS	L33	3834	edge$1 adj detect$3 same imag$3	USPAT	2004/12/15 17:01			
34	BRS	L34	16	33 same (boundary near2 (position or location))	USPAT	2004/12/15 17:11			
35	BRS	L35	384	texture$1 near1 filter$3	USPAT	2004/12/15 17:11			
36	BRS	L36	11	35 same (user or operator)	USPAT	2004/12/15 17:10			
37	BRS	L37	12696	(region$1 or area$1 or roi) same (object or imag$3) same (extract$3 or select$5 or defin$5) same (user or operator)	USPAT	2004/12/15 17:12			
38	BRS	L39	0	38 and (textur$2 near5 filter$3)	USPAT	2004/12/15 17:15			
39	BRS	L38	20	37 same (boundary near2 (position or locat$4))	USPAT	2004/12/15 17:12			
40	BRS	L40	1081	37 same edge$1	USPAT	2004/12/15 17:13			
41	BRS	L41	81	40 same boundary	USPAT	2004/12/15 17:13			
42	BRS	L42	65	41 same imag$3	USPAT	2004/12/15 17:13			
43	BRS	L43	5	42 same (vision or inspect$4)	USPAT	2004/12/15 17:13			

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
44	BRS	L44	144	(imag$3 near3 textur$2 near3 filter$3)	USPAT	2004/12/15 17:16			
45	BRS	L45	12	44 same (edge$1 or boundary)	USPAT	2004/12/15 17:20			
46	BRS	L46	3	1 and 44	USPAT	2004/12/15 17:22			
47	BRS	L47	132	edge$1 adj position same boundary	USPAT	2004/12/15 17:22			
48	BRS	L49	0	48 same filter$3	USPAT	2004/12/15 17:22			
49	BRS	L50	0	48 same texture$1	USPAT	2004/12/15 17:23			
50	BRS	L48	27	47 same imag$3	USPAT	2004/12/15 17:23			

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
1	BRS	L1	1	"6239554".pn.	USPAT	2004/12/16 09:47			
2	BRS	L2	12	((edge$1 or boundary) adj (position or locat$3)) same imag$3 same texture$1	USPAT	2004/12/16 10:39			
3	IS&R	L3	4250	(382/103,141,148,151,152,173,181,190,195,199,206,224,261,266).CCLS.	USPAT	2004/12/16 10:51			
4	BRS	L4	113	(user or operator) same imag$3 same edge$1 same texture$2	USPAT	2004/12/16 10:51			
5	BRS	L5	16	4 same filter$3	USPAT	2004/12/16 10:52			
6	BRS	L6	1	5 and ((edge or boudary) near2 (position$3 or locat$3))	USPAT	2004/12/16 10:54			
7	BRS	L7	1402	imag$3 same ((edge or boudary) adj (position$3 or locat$3))	USPAT	2004/12/16 10:55			
8	BRS	L8	22	7 same ((feature or pseudo or membership or candidate) near3 image$1)	USPAT	2004/12/16 10:56			
9	BRS	L9	0	8 same texture$1	USPAT	2004/12/16 10:56			
10	BRS	L10	4	3 and 8	USPAT	2004/12/16 10:58			

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
11	BRS	L11	528	filter$3 near2 texture$1	USPAT	2004/12/16 10:58			
12	BRS	L12	28	3 and 11	USPAT	2004/12/16 11:09			
13	BRS	L13	366	(select$4 near5 filter$3) with filtered with imag$3	USPAT	2004/12/16 11:12			
14	BRS	L14	48	13 same (edge$1 or boundar$3)	USPAT	2004/12/16 11:12			
15	IS&R	L15	1180	(382/199,266).CCLS.	USPAT	2004/12/16 11:12			
16	BRS	L16	9	14 and 15	USPAT	2004/12/16 11:20			
17	BRS	L17	104	(area or region) same imag$3 same (edge$1 or boundar$3) same ((select$5 or preselect$4 or pre-select$4) near3 filter$3)	USPAT	2004/12/16 13:27			
18	BRS	L18	6	17 same ((edge$1 or boundar$3) near1 (locat$4 or position$3))	USPAT	2004/12/16 11:26			
19	BRS	L19	2979	((plural$5 or multiple$1 or two or three) near3 filter$3 near5 imag$3)	USPAT	2004/12/16 11:27			
20	BRS	L20	270	19 same (edge$1 or boundary)	USPAT	2004/12/16 11:32			

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
21	BRS	L21	27	20 same ((choos$3 or select$5) near5 filter$3)	USPAT	2004/12/16 11:28			
22	BRS	L22	7	21 same (edge$1 near2 (locat$3 or find$3 or detect$4))	USPAT	2004/12/16 11:30			
23	BRS	L23	12256	edge adj detect$3	USPAT	2004/12/16 11:30			
24	BRS	L24	471	23 same ((filtering adj element$1) or filters)	USPAT	2004/12/16 11:33			
25	BRS	L25	123	24 same (region$1 or area$1 or roi)	USPAT	2004/12/16 11:34			
26	BRS	L26	9	25 same ((filtered or membership or pseudo) near3 imag$3)	USPAT	2004/12/16 11:35			
27	BRS	L27	0	((boundary or edge$1) near1 (locat$3 or position$1 or find$3 or tool)) same (select$5 near2 imag$2 near2 filter$3)	USPAT; EPO; JPO; DERWENT	2004/12/16 13:26			
28	BRS	L28	82	((boundary or edge$1) near1 (locat$3 or position$1 or find$3 or tool)) same ((imag$2 near2 filter$3) or (gabor adj filter$3))	USPAT; EPO; JPO; DERWENT	2004/12/16 13:27			

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
29	BRS	L29	21	28 same filters	USPAT; EPO; JPO; DERWENT	2004/12/16 13:27			
30	BRS	L30	3	29 same (area1 or portion$1 or region or roi)	USPAT	2004/12/16 13:28			
31	BRS	L31	7	29 same (area$1 or portion$1 or region$1 or roi)	USPAT	2004/12/16 13:44			
32	BRS	L32	629	(precis$4 or accurat$4) with (detect$3 or locat$3 or find$3) with (edge$1 or boundar$3) with imag$3	USPAT	2004/12/16 13:45			
33	BRS	L33	24	32 same filter$3	USPAT	2004/12/16 13:54			
34	BRS	L34	2571	select$4 near6 filter$3 near10 imag$3	USPAT	2004/12/16 13:54			
35	BRS	L35	0	34 same (edge adj (location or locating or position))	USPAT	2004/12/16 13:55			
36	BRS	L36	933	34 same filters	USPAT	2004/12/16 13:55			
37	BRS	L37	46	36 same edge	USPAT	2004/12/16 13:56			
38	BRS	L38	11	15 and 37	USPAT	2004/12/16 14:06			

	Type	L #	Hits	Search Text	DBs	Time Stamp	Comments	Error Definition	Errors
39	BRS	L39	333	(edge adj detect$3) same ((edge or boundary) adj (location or position))	USPAT	2004/12/16 14:19			
40	BRS	L40	35	39 same (gabor or filter$3)	USPAT	2004/12/16 14:08			
41	BRS	L41	18	40 same imag$3	USPAT	2004/12/16 14:18			
42	IS&R	L42	785	(382/199).CCLS.	USPAT	2004/12/16 14:18			
43	BRS	L43	7	39 same (imag$3 near5 filter$3)	USPAT	2004/12/16 14:19			
44	BRS	L44	0	42 and 43	USPAT	2004/12/16 14:19			
45	BRS	L45	70	gabor near3 filters	USPAT	2004/12/16 14:19			
46	BRS	L46	3	42 and 45	USPAT	2004/12/16 14:23			
47	BRS	L47	5	((plural$4 or two) adj filtered adj image$1) same edge$1	USPAT	2004/12/16 14:24			

Refine Search

Search Results -

Terms	Documents
((user or operator) near2 (select$4 or invok$3 or direct$3)) same edge same imag$3	703

Database:
- US Pre-Grant Publication Full-Text Database
- US Patents Full-Text Database
- US OCR Full-Text Database
- EPO Abstracts Database
- JPO Abstracts Database
- Derwent World Patents Index
- IBM Technical Disclosure Bulletins

Search: 119 and L21

Refine Search | Recall Text | Clear | Interrupt

Search History

DATE: Thursday, December 16, 2004 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT; PLUR=YES; OP=ADJ			
L1	((edge or boundary) near1 (position or location)) same imag$3 same (feature or characteristic or textur$2)	357	L1
L2	L1 same filter$3	33	L2
L3	L2 same (area or region)	12	L3
L4	texture with edge with imag$3 with filter$3	50	L4
DB=PGPB; PLUR=YES; OP=ADJ			
L5	pseudo image same texture	1	L5
L6	L5 and (previous$2 near3 boundary)	1	L6
L7	l6 and (similar near2 case)	1	L7
L8	L7 and (pre-select$3 near5 filter$3 near10 boundary)	1	L8
L9	L5 and (texture filtering near10 (preselect$3 or pre-select$3))	1	L9
L10	L5 and (filtering near10 (select$3 or preselect$3 or pre-select$3))	1	L10
	generat$3 same pseudo image same boundary same filter$3 same		

L11	(preselect$3 or pre-select$3 or select$4)	1	L11
L12	generat$3 with pseudo image same boundary same similar	1	L12
L13	(psuedo image near5 (membership image or feature image))	0	L13
L14	psuedo image same (membership image or feature image)	0	L14
L15	(pseudo image near3 (membership image or feature image))	1	L15
L16	L5 and better	1	L16
L17	l5 and micron$1	1	L17
L18	L5 and resolution	1	L18
DB=USPT; PLUR=YES; OP=ADJ			
L19	edge near1 locator	213	L19
L20	L19 same boundary	10	L20
L21	((user or operator) near2 (select$4 or invok$3 or direct$3)) same edge same imag$3	703	L21

END OF SEARCH HISTORY

h e b b cg b e e ch

Refine Search

Search Results -

Terms	Documents
L48 and (texture near3 around)	1

Database: US Pre-Grant Publication Full-Text Database; US Patents Full-Text Database; US OCR Full-Text Database; EPO Abstracts Database; JPO Abstracts Database; Derwent World Patents Index; IBM Technical Disclosure Bulletins

Search: L49

Refine Search | Recall Text | Clear | Interrupt

Search History

DATE: Friday, December 17, 2004 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
	DB=USPT; PLUR=YES; OP=ADJ		
L1	((edge or boundary) near3 detect$3) same imag$3	7525	L1
L2	((edge or boundary) near3 detect$3) with imag$3 with (precis$4 or correctly or accurat$3)	273	L2
L3	L2 same (user or operator)	13	L3
L4	(identif$4 or select$3 or defin$4 or designat$3) with (region or area or roi or portion) with imag$3	45541	L4
L5	L4 same (edge or boundary)	5792	L5
L6	L5 same (user or operator)	749	L6
L7	L6 same filter$3	60	L7
L8	L7 same ((edge or boundary) near3 (location or position))	5	L8
L9	(boundary or edge) same ((multiple or plural$4 or two or three) near5 imag$3 near5 filter$3)	351	L9
L10	L9 same (edge near3 (detect$3 or locat$3 or position$3))	74	L10

h e b b cg b e e ch

L11	L10 same filtered	28	L11
L12	((edge or boundary) near3 (position or locat$3 or detect$4)) with imag$3 with characteristic	294	L12
L13	L12 same filter$3	55	L13
L14	L13 same ((region near1 interest) or roi or area or region)	32	L14
L15	L14 same object	22	L15
L16	(boundary near1 (position or locat$3)) or (edge near1 (position or locat$3))	39253	L16
L17	L16 same (imag$3 near3 filter$3)	77	L17
L18	L17 same ((identif$4 or select$3 or designat$3 or defin$5) near4 (area or section or portion or region))	6	L18
L19	((plural$4 or multiple or two) near3 filtered near3 image)	311	L19
L20	l1 same l9	68	L20
L21	L20 same (area or region or zone or section or portion)	29	L21
L22	(user or operator) same (edge near2 detect$3) same imag$3	733	L22
L23	L22 same boundary	81	L23
L24	L23 same boundary	81	L24
L25	L24 same (sobel or gabor or filter$3)	21	L25
DB=PGPB; PLUR=YES; OP=ADJ			
L26	select$4 same image same filter$3 same element	603	L26
L27	L26 same (filtered near2 result)	2	L27
L28	(filtered near2 result) same (select$4 near5 filter$3) same imag$3	4	L28
DB=USPT; PLUR=YES; OP=ADJ			
L29	(filtered near2 result) same (select$4 near5 filter$3) same imag$3	22	L29
L30	L29 same edge	5	L30
L31	(edge near2 (detect$3 or locat$3)) same (select$4 near5 filter$3) same imag$3	85	L31
L32	L31 same function	7	L32
L33	l24 same filters	12	L33
L34	(((area or region) near1 interest) or roi) same (edge near2 (detect$3 or locat$3 or position$3)) same imag$3	153	L34
L35	L34 same boundar$3	25	L35
L36	L35 same filter$3	2	L36
L37	((image near1 boundary near3 detect$3) or (image near2 edge near2 detect$3)) same filter$3 same (feature or candidate or member or characteristic or pseudo)	48	L37
L38	L37 same (position or location)	5	L38
L39	(edge near1 position) same imag$3 same filter$3	94	L39
L40	L39 same boundary	4	L40
L41	(boundary or edge) near10 dimensional inspection	2	L41
DB=PGPB; PLUR=YES; OP=ADJ			
L42	(boundary or edge) near10 dimensional inspection	1	L42
L43	(dimension$2 near1 inspect$3) same ((edge or boundary) near2 (position or location))	1	L43

h e b b cg b e e ch

L44	(dimension$2 near1 inspect$3)	189	L44
L45	((dimension$2 near1 inspect$3) near3 measur$6)	21	L45
L46	edge point near1 analy$5	5	L46
L47	L46 and second mode	1	L47
L48	(second near1 mode) same (edge near2 detect$3)	12	L48
L49	L48 and (texture near3 around)	1	L49

END OF SEARCH HISTORY

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texture* <near/3> filter* <paragraph> imag* <paragraph> Search

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1 **Region competition: unifying snakes, region growing, and Bayes/MI for multiband image segmentation**
Song Chun Zhu; Yuille, A.;
Pattern Analysis and Machine Intelligence, IEEE Transactions on , Volume: 18 , Issue: 9 , Sept. 1996
Pages:884 - 900

[Abstract] [PDF Full-Text (1952 KB)] IEEE JNL

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2 **The effect of morphological filters on texture boundary localization**
Noble, J.A.;
Pattern Analysis and Machine Intelligence, IEEE Transactions on , Volume: 18 , Issue: 5 , May 1996
Pages:554 - 561

[Abstract] [PDF Full-Text (980 KB)] IEEE JNL

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3 **Real-time textural edge detection by incoherent spatial Gaussian bandpass filtering**
Park, J.; Poon, T.C.;
Geoscience and Remote Sensing, IEEE Transactions on , Volume: 26 , Issue: 6 , Nov. 1988
Pages:839 - 849

[Abstract] [PDF Full-Text (628 KB)] IEEE JNL

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4 **Learning to segment images using region-based perceptual features**
Kaufhold, J.; Hoogs, A.;
Computer Vision and Pattern Recognition, 2004. CVPR 2004. Proceedings of tl 2004 IEEE Computer Society Conference on , Volume: 2 , 27 June-2 July 200

Pages:II-954 - II-961 Vol.2

[Abstract] [PDF Full-Text (849 KB)] IEEE CNF

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5 **Characterisation of clouds and their heights by texture analysis of m spectral stereo images**
Hetzheim, H.;
Geoscience and Remote Sensing Symposium, 2000. Proceedings. IGARSS 20(IEEE 2000 International , Volume: 5 , 24-28 July 2000
Pages:1798 - 1800 vol.5

[Abstract] [PDF Full-Text (268 KB)] IEEE CNF

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6 **On learning texture edge detectors**
Will, S.; Hermes, L.; Buhmann, J.M.; Puzicha, J.;
Image Processing, 2000. Proceedings. 2000 International Conference on , Vol 3 , 10-13 Sept. 2000
Pages:877 - 880 vol.3

[Abstract] [PDF Full-Text (492 KB)] IEEE CNF

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7 **Pyramid-transform based lung-tissue MRI image segmentation**
Liyun Yu; Rolland, J.P.;
Engineering in Medicine and Biology society, 1997. Proceedings of the 19th Ar International Conference of the IEEE , Volume: 2 , 30 Oct.-2 Nov. 1997
Pages:487 - 490 vol.2

[Abstract] [PDF Full-Text (288 KB)] IEEE CNF

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8 **Geodesic active regions for supervised texture segmentation**
Paragios, N.; Deriche, R.;
Computer Vision, 1999. The Proceedings of the Seventh IEEE International Conference on , Volume: 2 , 20-27 Sept. 1999
Pages:926 - 932 vol.2

[Abstract] [PDF Full-Text (312 KB)] IEEE CNF

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9 **Robust boundary detection for skin lesions**
Denton, W.E.; Duller, A.W.G.; Fish, P.J.;
Engineering in Medicine and Biology Society, 1995. IEEE 17th Annual Conference , Volume: 1 , 20-23 Sept. 1995
Pages:407 - 408 vol.1

[Abstract] [PDF Full-Text (324 KB)] IEEE CNF

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10 **Computer texture boundary detection based on human visual perception model**
Hui, K.P.; Cheung, Y.S.; Leung, C.H.;
Speech, Image Processing and Neural Networks, 1994. Proceedings, ISSIPNN 1994 International Symposium on , 13-16 April 1994
Pages:1 - 4 vol.1

[Abstract] [PDF Full-Text (376 KB)] IEEE CNF

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11 **Contextual classification and segmentation of textured images**
Fung, P.W.; Grebbin, G.; Attikiouzel, Y.;
Acoustics, Speech, and Signal Processing, 1990. ICASSP-90., 1990 Internatio
Conference on , 3-6 April 1990
Pages:2329 - 2332 vol.4

[Abstract] [PDF Full-Text (388 KB)] **IEEE CNF**

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1 Multiresolution sampling procedure for analysis and synthesis of texture images

Jeremy S. De Bonet

August 1997 **Proceedings of the 24th annual conference on Computer graphics and interactive techniques**

Full text available: pdf(2.23 MB) Additional Information: full citation, references, citings

2 Generalized stochastic subdivision

J. P. Lewis

July 1987 **ACM Transactions on Graphics (TOG)**, Volume 6 Issue 3

Full text available: pdf(2.67 MB) Additional Information: full citation, abstract, references, citings, index terms, review

Stochastic techniques have assumed a prominent role in computer graphics because of their success in modeling a variety of complex and natural phenomena. This paper describes the basis for techniques such as stochastic subdivision in the theory of random processes and estimation theory. The popular stochastic subdivision construction is then generalized to provide control of the autocorrelation and spectral properties of the synthesized random functions. The generalized construction is suit ...

3 Jump map-based interactive texture synthesis

Steve Zelinka, Michael Garland

October 2004 **ACM Transactions on Graphics (TOG)**, Volume 23 Issue 4

Full text available: pdf(529.89 KB) Additional Information: full citation, abstract, references, index terms

We present techniques for accelerated texture synthesis from example images. The key idea of our approach is to divide the task into two phases: analysis, and synthesis. During the analysis phase, which is performed once per sample texture, we generate a jump map. Using the jump map, the synthesis phase is capable of synthesizing texture similar to the analyzed example at interactive rates. We describe two such synthesis phase algorithms: one for creating images, and one for di ...

Keywords: Interactive texture synthesis, jump maps, texturing surfaces

4 Industrial applications: A system for real-time fabric inspection and industrial decision

Aura Conci, Claudia Belmiro Proença

h c g e cf c

July 2002 **Proceedings of the 14th international conference on Software engineering and knowledge engineering**

Full text available: pdf(264.34 KB) Additional Information: full citation, abstract, references, index terms

This work presents an application of software engineering to fabric inspection. An inspection system has been developed for textile industries that aims automatic failure detection. Such as wood, paper and steel industries, this environment has particular characteristics in which surface defect detection is used for quality control. This system combines concept from software engineering and decision support. Detection of defects within the inspected texture is performed in a first step acquiring ...

Keywords: decision support systems, industrial application, real-time quality control

5 The space of human body shapes: reconstruction and parameterization from range scans

Brett Allen, Brian Curless, Zoran Popović

July 2003 **ACM Transactions on Graphics (TOG)**, Volume 22 Issue 3

Full text available: pdf(6.74 MB) Additional Information: full citation, abstract, references, index terms

We develop a novel method for fitting high-resolution template meshes to detailed human body range scans with sparse 3D markers. We formulate an optimization problem in which the degrees of freedom are an affine transformation at each template vertex. The objective function is a weighted combination of three measures: proximity of transformed vertices to the range data, similarity between neighboring transformations, and proximity of sparse markers at corresponding locations on the template and ...

Keywords: deformations, morphing, non-rigid registration, synthetic actors

6 Multi-resolution representations: OpenGL volumizer: a toolkit for high quality volume rendering of large data sets

Praveen Bhaniramka, Yves Demange

October 2002 **Proceedings of the 2002 IEEE symposium on Volume visualization and graphics**

Full text available: pdf(1.20 MB) Additional Information: full citation, abstract, references, index terms

We present the OpenGL Volumizer API for interactive, high-quality, scalable visualization of large volumetric data sets. Volumizer provides a high-level interface to OpenGL hardware to allow application writers and researchers to visualize multiple gigabytes of volumetric data. Use of multiple graphics pipes scales rendering performance and system resources including pixel-fill rate and texture memory size. Volume roaming and multi-resolution volume rendering provide alternatives for interactive ...

Keywords: clip-textures, large data, texture mapping, volume visualization

7 Texture mapping 3D models of real-world scenes

Frederick M. Weinhaus, Venkat Devarajan

December 1997 **ACM Computing Surveys (CSUR)**, Volume 29 Issue 4

Full text available: pdf(1.98 MB) Additional Information: full citation, abstract, references, index terms, review

Texture mapping has become a popular tool in the computer graphics industry in the last few years because it is an easy way to achieve a high degree of realism in computer-generated imagery with very little effort. Over the last decade, texture-mapping techniques have advanced to the point where it is possible to generate real-time perspective

simulations of real-world areas by texture mapping every object surface with texture from photographic images of these real-world areas. The techniqu ...

Keywords: anti-aliasing, height field, homogeneous coordinates, image perspective transformation, image warping, multiresolution data, perspective projection, polygons, ray tracing, real-time scene generation, rectification, registration, texture mapping, visual simulators, voxels

8 A level-set method for flow visualization

Rüdiger Westermann, Christopher Johnson, Thomas Ertl
October 2000 **Proceedings of the conference on Visualization '00**

Full text available: pdf(2.27 MB) Additional Information: full citation, index terms

Keywords: feature extraction, flow visualization, level-sets, multiscale representation, texture mapping

9 Interactive exploration of volume line integral convolution based on 3D-texture mapping

C. Rezk-Salama, P. Hastreiter, C. Teitzel, T. Ertl
October 1999 **Proceedings of the conference on Visualization '99: celebrating ten years**

Full text available: pdf(3.06 MB) Additional Information: full citation, abstract, references, citings, index terms

Line integral convolution (LIC) is an effective technique for visualizing vector fields. The application of LIC to 3D flow fields has yet been limited by difficulties to efficiently display and animate the resulting 3D-images. Texture-based volume rendering allows interactive visualization and manipulation of 3D-LIC textures. In order to ensure the comprehensive and convenient exploration of flow fields, we suggest interactive functionality including transfer functions and different clippin ...

Keywords: 3D-textures mapping, animated LIC, direct volume rendering, flow visualization, interactive volume exploration

10 Session 7: rendering: Detail synthesis for image-based texturing

Ryan M. Ismert, Kavita Bala, Donald P. Greenberg
April 2003 **Proceedings of the 2003 symposium on Interactive 3D graphics**

Full text available: pdf(3.31 MB) Additional Information: full citation, abstract, references, index terms

Image-based modeling techniques permit the creation of visually interesting geometric models from photographs. But traditional image-based texturing (IBT) techniques often result in extracted textures of poor, uneven quality. This paper introduces a novel technique to improve the quality of image-based textures. We compute a simple and efficient texture quality metric based on the Jacobian of the imaging transform. We identify the correlation between the values of the Jacobian metric and the lev ...

Keywords: image-based modeling, texture mapping

11 System section: 3D video surveillance with Augmented Virtual Environments

Ismail Oner Sebe, Jinhui Hu, Suya You, Ulrich Neumann
November 2003 **First ACM SIGMM international workshop on Video surveillance**

Full text available: pdf(583.25 KB) Additional Information: full citation, abstract, references, index terms

Recent advances in sensing and computing technologies have inspired a new generation of data analysis and visualization systems for video surveillance applications. We present a novel visualization system for video surveillance based on an Augmented Virtual Environment (AVE) that fuses dynamic imagery with 3D models in a real-time display to help observers comprehend multiple streams of temporal data and imagery from arbitrary views of the scene. This paper focuses on our recent technical extens ...

Keywords: augmented reality, object detection and tracking, video surveillance

12 Dynamic 3D maps as visual interfaces for spatio-temporal data

Jürgen Döllner, Oliver Kersting

November 2000 **Proceedings of the 8th ACM international symposium on Advances in geographic information systems**

Full text available: pdf(888.10 KB) Additional Information: full citation, abstract, citings, index terms

Dynamic 3D maps represent visual interfaces used to present and explore spatial and spatio-temporal data. They provide powerful design capabilities for map contents compared to current map toolkits and general-purpose 3D graphics systems. The underlying object model introduces abstract building blocks which are configured for individual animated, interactive 3D maps. These building blocks do not only include visual primitives but also structural and behavioral primitives: Structural primitive ...

Keywords: animated cartography, geographic visualization, information visualization, interactive mapping, interface design

13 Session P9: interactive volume rendering: Texture hardware assisted rendering of time-varying volume data

Eric B. Lum, Kwan Liu Ma, John Clyne

October 2001 **Proceedings of the conference on Visualization '01**

Full text available: pdf(11.72 MB) Additional Information: full citation, abstract, references, citings, index terms

Publisher Site

In this paper we present a hardware-assisted rendering technique coupled with a compression scheme for the interactive visual exploration of time-varying scalar volume data. A palette-based decoding technique and an adaptive bit allocation scheme are developed to fully utilize the texturing capability of a commodity 3-D graphics card. Using a single PC equipped with a modest amount of memory, a texture capable graphics card, and an inexpensive disk array, we are able to render hundreds of time s ...

Keywords: PC, compression, high performance computing, out-of-core processing, scientific visualization, texture hardware, time-varying data, transform encoding, volume rendering

14 Gaze-contingent display using texture mapping and OpenGL: system and applications

Stavri G. Nikolov, Timothy D. Newman, Dave R. Bull, Nishan C. Canagarajah, Michael G. Jones, Iain D. Gilchrist

March 2004 **Proceedings of the Eye tracking research & applications symposium on Eye tracking research & applications**

Full text available: pdf(685.03 KB) Additional Information: full citation, abstract, references, index terms

This paper describes a novel gaze-contingent display (GCD) using texture mapping and OpenGL. This new system has a number of key features: (a) it is platform independent, i.e.

it runs on different computers and under different operating systems; (b) it is eyetracker independent, since it provides an interactive focus+context display that can be easily integrated with any eye-tracker that provides real-time 2-D gaze estimation; (c) it is flexible in that it provides for straightforward modificati ...

Keywords: display, eye-tracking, gaze-contingent, image analysis, image compression, image fusion, openGL, texture mapping

15 Computational strategies for object recognition

Paul Suetens, Pascal Fua, Andrew J. Hanson

March 1992 **ACM Computing Surveys (CSUR)**, Volume 24 Issue 1

Full text available: pdf(6.37 MB) Additional Information: full citation, abstract, references, citings, index terms, review

This article reviews the available methods for automated identification of objects in digital images. The techniques are classified into groups according to the nature of the computational strategy used. Four classes are proposed: (1) the simplest strategies, which work on data appropriate for feature vector classification, (2) methods that match models to symbolic data structures for situations involving reliable data and complex models, (3) approaches that fit models to the photometry and ...

Keywords: image understanding, model-based vision, object recognition

16 Making faces

Brian Guenter, Cindy Grimm, Daniel Wood, Henrique Malvar, Fredric Pighin

July 1998 **Proceedings of the 25th annual conference on Computer graphics and interactive techniques**

Full text available: pdf(1.70 MB) Additional Information: full citation, references, citings, index terms

17 The digital Michelangelo project: 3D scanning of large statues

Marc Levoy, Kari Pulli, Brian Curless, Szymon Rusinkiewicz, David Koller, Lucas Pereira, Matt Ginzton, Sean Anderson, James Davis, Jeremy Ginsberg, Jonathan Shade, Duane Fulk

July 2000 **Proceedings of the 27th annual conference on Computer graphics and interactive techniques**

Full text available: pdf(10.83 MB) Additional Information: full citation, abstract, references, citings, index terms

We describe a hardware and software system for digitizing the shape and color of large fragile objects under non-laboratory conditions. Our system employs laser triangulation rangefinders, laser time-of-flight rangefinders, digital still cameras, and a suite of software for acquiring, aligning, merging, and viewing scanned data. As a demonstration of this system, we digitized 10 statues by Michelangelo, including the well-known figure of David, two building interiors, and all 1,163 extant f ...

Keywords: 3D scanning, cultural heritage, graphics systems, mesh generation, range images, rangefinding, reflectance and shading models, sensor fusion

18 Document analysis: Visual signature based identification of Low-resolution document images

Ardhendu Behera, Denis Lalanne, Rolf Ingold

October 2004 **Proceedings of the 2004 ACM symposium on Document engineering**

Full text available: pdf(2.00 MB) Additional Information: full citation, abstract, references, index terms

In this paper, we present (a) a method for identifying documents captured from low-resolution devices such as web-cams, digital cameras or mobile phones and (b) a technique for extracting their textual content without performing OCR. The first method associates a hierarchically structured visual signature to the low-resolution document image and further matches it with the visual signatures of the original high-resolution document images, stored in PDF form in a repository. The matching algor ...

Keywords: document visual signature, document-based meeting retrieval, documents' content extraction, low-resolution document image identification

19 A survey on wavelet applications in data mining

Tao Li, Qi Li, Shenghuo Zhu, Mitsunori Ogihara

December 2002 **ACM SIGKDD Explorations Newsletter**, Volume 4 Issue 2

Full text available: pdf(330.06 KB) Additional Information: full citation, abstract, references, citings

Recently there has been significant development in the use of wavelet methods in various data mining processes. However, there has been written no comprehensive survey available on the topic. The goal of this is paper to fill the void. First, the paper presents a high-level data-mining framework that reduces the overall process into smaller components. Then applications of wavelets for each component are reviewd. The paper concludes by discussing the impact of wavelets on data mining research an ...

20 Live paint: painting with procedural multiscale textures

Ken Perlin, Luiz Velho

September 1995 **Proceedings of the 22nd annual conference on Computer graphics and interactive techniques**

Full text available: pdf(240.10 KB) Additional Information: full citation, references, citings, index terms

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